

The BREAK BIOFILMS Training Network is recruiting!

Join us and spread the science!

15 Positions for Early-Stage-Researchers H2020-MSCA-ITN “Breaking Bad Biofilms. Innovative Analysis and Design Rules for Next-Generation Antifouling Interfaces” (Grant Agreement Number 813439)

Who are we?

The BREAK BIOFILMS Training Network “Breaking Bad Biofilms: Innovative Analysis and Design Rules for Next-Generation Antifouling Interfaces” is a consortium of world leaders in sensing, cell imaging, interfacial engineering, microbiology and nanof ormulation from 6 universities, 8 companies, a consortium of food industries, a research centre, and a business and innovation centre. ESRs will have access to state-of-the-art equipment and will obtain a unique technical, industrial, and entrepreneurial training.

The main objectives of BREAK BIOFILMS are:

- To understand the (bio)physicochemical mechanisms of biofilm formation
- To produce the technology for detecting and identifying biofilm formation with extreme sensitivity
- To develop next generation biocides for preventing and destroying biofilms in industrial and biomedical areas.

Find more information about this Project in:

<https://cordis.europa.eu/project/rcn/218447/factsheet/en>

*****IMPORTANT: application dates and start dates vary. Please contact the supervisors for each ESR Project (table below) for more information, as well as for specific/local acceptance requirements (use as subject “BREAK BIOFILMS Application”, and mention the ESR number(s) you are applying to). ESR positions will also be advertised locally at the respective institutions and local recruitment sites.**

ESR projects

ESR	Title	Host Institution	Research fields	Supervisor(s)
1	Rapid paper-based sensor for the detection of biofilm formation	Universidad de Oviedo	Chemistry, Chemical engineering, Biotechnology, Nanoscience, Pharmacy	María Carmen Blanco López (cblanco@uniovi.es) Montserrat Rivas (rivas@uniovi.es)

2	Novel nanomaterials for enhanced antibiofilm effect	Universidad de Oviedo	Chemistry, Chemical engineering, Biotechnology, Nanoscience, Pharmacy	María Carmen Blanco López (cblanco@uniovi.es) Gemma Gutiérrez (gutierrezgemma@uniovi.es)
3	Lab-on-a-Tip for Localized Biofilm Analysis and Treatment	The University of Warwick	Chemistry, Electrochemistry, Nanoscience, Surface chemistry	Patrick Unwin (p.r.unwin@warwick.ac.uk) Julie Macpherson (j.macpherson@warwick.ac.uk)
4	Development and Application of an Electrochemical Biofilm Activity Sensor	The University of Warwick	Chemistry, Electrochemistry, Nanoscience, Surface chemistry	Julie Macpherson (j.macpherson@warwick.ac.uk) Patrick Unwin (p.r.unwin@warwick.ac.uk)
5	Development of functionalized atomic force-scanning electrochemical probes for studying biofilm formation	Universität Ulm	Analytical Chemistry, Electrochemistry, Spectroscopy, Nanoscience, Surface chemistry	Christine Kranz (Christine.kranz@uni-ulm.de) Boris Mizaikoff (boris.mizaikoff@uni-ulm.de)
6	Analytical platforms for studying the chemical and physical properties of biofilms	Universität Ulm	Analytical Chemistry, Electrochemistry, Spectroscopy, Nanoscience, Chemometrics	Boris Mizaikoff (boris.mizaikoff@uni-ulm.de) Christine Kranz (Christine.kranz@uni-ulm.de)
7	Nanoantimicrobial films: deposition, characterization and evaluation of their bioactivity properties, including ion and nanoparticle release	Università degli Studi di Bari Aldo Moro	Nanoscience, Spectroscopy, Chemistry, Surface chemistry, Electrochemistry, Physics, Biotechnology	Nicola Cioffi (nicola.cioffi@uniba.it)
8	Development of multi-component antimicrobial nanomaterials providing synergistic bioactivity, fighting antimicrobial resistance	Università degli Studi di Bari Aldo Moro	Nanoscience, Spectroscopy, Chemistry, Surface chemistry, Electrochemistry, Physics, Biotechnology	Nicola Cioffi (nicola.cioffi@uniba.it)
9	In-vivo nanobioelectrodes for intracellular analysis of biofilm development and degradation	Aarhus Universitat	Chemistry, Electrochemistry, Nanoscience	Elena Ferapontova (elena.ferapontova@inano.u.dk)

10	Anti-microbial biofilm breaking systems based on encapsulated inhibitors and enzymes	Aarhus Universitat	Chemistry, Electrochemistry, Nanoscience	Elena Ferapontova (elena.ferapontova@inano.u.dk)
11	Redox Mediators for High Sensitivity Electrochemical Detection of Biofilms	Dublin City University	Chemistry, Electrochemistry, Nanoscience, Spectroscopy	Robert Forster (Robert.Forster@dcu.ie)
12	Microfluidic Device for Rapid Detection and Identification of Bacteria at the Point of Use	Dublin City University	Chemistry, Electrochemistry, Nanoscience, Spectroscopy	Robert Forster (Robert.Forster@dcu.ie)
13	Development of novel bacteriophage-based products for biofilm removal	IPLA-CSIC	Biotechnology, Microbiology	Pilar Garca (pgarcia@ipla.csic.es)
14	Identification of molecular targets to disperse biofilms	IPLA-CSIC	Biotechnology, Microbiology	Mara Fernandez (mfernandez@ipla.csic.es)
15	Development of a novel, non-destructive, real-time and portable method for the detection of complex bacterial biofilms in the Agri-food industry	ASINCAR Agrifood Technology Centre	Biology, Biotechnology, Computer Science, Chemical engineering	Juan Daz (juan.diaz@asincar.com), Roberto Moran (robertomr@asincar.com) Felipe Lombo (lombofelipe@uniovi.es)

Benefits

The successful candidates will be employed on a full-time basis with a competitive salary in accordance with the Marie Skłodowska-Curie Actions (MSCA) rules and the personal circumstances of the applicant. The successful candidates will receive a financial package consisting of MSCA living allowance and mobility allowance. Eligible applicants with a family will also receive an additional family allowance according to the rules of the MSCA. The exact (net) salary will be confirmed upon appointment and will depend on the Host Institution's local tax regulations and on the country coefficient of your Host institution country.

Requirements

Applicants must fulfill the usual MSCA eligibility and mobility rules.

-Applicants must at the date of recruitment be in the first 4 years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree.

-The researcher must not have resided or carried out his/her main activity (work, studies, etc.) in the country of his/her host organisation from more than 12 months in the 3 years immediately prior to his/her recruitment (short stays, such as holidays, not taken into account).

Selection process

*****IMPORTANT: please, contact the main supervisors of the positions for further details.**

Applications will be welcomed from candidates of any nationality with a proven track record in one of the fields related to the project demonstrated through a Master's degree certificate and appropriate experience. Candidates should also be able to demonstrate extra-academic experience and evidence of creativity and leadership. The Supervisory Board (SB) will grade the candidates on a scale regarding:

1. Academic excellence (0-30 points)
2. Professional experience (0-10 points)
3. Linguistic proficiency in English and /or the languages of his/her Host Institution (0-10 points)
4. Publications and other scientific activities (0-20 points)
5. Letters of reference (0-10 points).

SB will shortlist candidates, to be interviewed in person or via video conference by the recruiting beneficiary supervisors, who will take the final decision according to the rules of the hosting institution. The successful ESRs will then begin their 36 month contracts. The candidates will automatically be informed at each stage of the evaluation process.

Additional comments

Data collected from the candidates will be used for recruitment purposes only and will not be shared outside BREAK BIOFILMS unless authorised by the applicant. The data will be kept for a period of five years after the end of the project for EU auditing purposes.



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